

## Freeform Search

---

Database:	US Pre-Grant Publication Full-Text Database
	US Patents Full-Text Database
	US OCR Full-Text Database
	EPO Abstracts Database
	JPO Abstracts Database
	Derwent World Patents Index
	IBM Technical Disclosure Bulletins

Term:

Display:  Documents in Display Format:  Starting with Number

Generate: ☐ Hit List ☒ Hit Count ☐ Side by Side ☐ Image

---

---

### Search History

---

DATE: Monday, January 05, 2004 [Printable Copy](#) [Create Case](#)

Set Name	Query	Hit Count	Set Name
side by side			result set
DB=PGPB,USPT,EPAB,JPAB,DWPI; THES=ASSIGNEE; PLUR=YES; OP=OR			
L1	(asphalt particle with surfactant)	9	L1

END OF SEARCH HISTORY

First Hit☐ **Generate Collection** **Print**

L9: Entry 1 of 2

File: PGFB

Jun 6, 2002

PGPUB-DOCUMENT-NUMBER: 20020066813  
PGPUB-FILING-TYPE: new  
DOCUMENT-IDENTIFIER: US 20020066813 A1

TITLE: Methods and apparatus for recycling asphalt shingle material

PUBLICATION-DATE: June 6, 2002

## INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Mischo, Donald J.	Janesville	WI	US	

US-CL-CURRENT: 241/185.5

## CLAIMS:

## I claim:

1. A method for processing used and manufacturing scrap asphalt shingle material comprising the steps of: collecting said asphalt shingle material; shredding said material to a first maximum size; separating said shredded material into (i) fine material and (ii) course material; and forwarding (i) said fine material to a first finish processing line and (ii) said course material to a second finish processing line.
2. The method of claim one further comprising the step of removing foreign objects from said material after said collecting step.
3. A method for processing used and manufacturing scrap asphalt shingle material comprising the steps of: providing: a shredder having an inlet and an outlet, said shredder being adapted to shred said asphalt shingle material to a first maximum size, and a separating screen located downstream of shredder, said separating screen being adapted for limiting the size of the shredded material passing therethrough; supplying said asphalt shingle material to the inlet of the shredder; shredding said material to a maximum size of said first maximum size; separating said shredded material with said separating screen into (i) fine material and (ii) course shredded material; and forwarding (i) said fine material to a first finish processing line and (ii) said course material to a second finish processing line.
4. The method of claim 3 in which said separating screen is adapted for presentation of different sized openings to the shredded material for adjusting the size of the shredded material passing therethrough.
5. The method of claim 4 further comprising the steps of: monitoring the aggregate-to-asphalt ratio in said fine material; and adjusting the size of the openings in said separating screen for adjusting the aggregate-to-asphalt ratio in said fine material prior to said forwarding step.

6. The method of claim 5 in which said separating screen is further adapted for changing the angle of presentation of the openings therein for further adjusting the aggregate-to-asphalt ratio in said fine material.

7. The method of claim 3 further comprising the step of providing a filtering screen between said shredder and said separating screen, said filtering screen being adapted for limiting the size of the pieces of shredded material flowing to said separating screen to said first maximum size.

8. Automated apparatus for processing used and manufacturing scrap asphalt shingle material, said apparatus comprising: material staging station having an inlet and an outlet, said material staging station being adapted to receive and discharge a substantially continuous supply of said asphalt shingle material therethrough; a shredder located downstream of said material staging station, said shredder having an inlet for receiving material discharged from said material staging station and having an outlet downstream thereof; separating apparatus located downstream of said shredder, said separating apparatus comprising: screening apparatus having an upstream side and a downstream side, and having openings extending therebetween for shredded material to pass therethrough and for limiting the size of such shredded material passing therethrough, first collection station positioned for collection of material passing through said openings, and second collection station positioned for collection of material larger than said openings; and material transport operatively associating said material staging station, said shredder and said upstream side of said screen apparatus with respect to flow of shingle material therebetween.

9. The apparatus of claim 8 further comprising filtering apparatus located between said shredder and said separating apparatus, and being adapted to limit the size of shredded material flowing therebetween to a first maximum size.

## WEST Search History

[Hide Items](#)[Restore](#)[Clear](#)[Cancel](#)

DATE: Monday, January 05, 2004

Hide?	Set Name	Query	Hit Count
	<i>DB=PGPB,USPT,EPAB,JPAB,DWPI; THES=ASSIGNEE; PLUR=YES; OP=ADJ</i>		
<input type="checkbox"/>	L10	L9 and surfac\$6	2
<input type="checkbox"/>	L9	L8 and flakes	2
<input type="checkbox"/>	L8	L7 and(shingle or roof\$4)	52
<input type="checkbox"/>	L7	asphalt and 241/\$.ccls.	245
<input type="checkbox"/>	L6	L3 and flake	14
<input type="checkbox"/>	L5	L4 and flake	9
<input type="checkbox"/>	L4	L2 and 427/212-222.ccls..ccls.	95
<input type="checkbox"/>	L3	L2 and 427/180-206.ccls.	170
<input type="checkbox"/>	L2	asphalt and 427/\$.ccls.	1020
	<i>DB=PGPB,USPT,EPAB,JPAB,DWPI; THES=ASSIGNEE; PLUR=YES; OP=OR</i>		
<input type="checkbox"/>	L1	(asphalt particle with surfactant)	9

END OF SEARCH HISTORY

## WEST Search History

[Hide Items](#)[Restore](#)[Clear](#)[Cancel](#)

DATE: Monday, January 05, 2004

**Hide? Set Name Query****Hit Count***DB=PGPB,USPT,EPAB,JPAB,DWPI; THES=ASSIGNEE; PLUR=YES; OP=ADJ*

- |                          |    |                    |     |
|--------------------------|----|--------------------|-----|
| <input type="checkbox"/> | L5 | L4 and flake       | 17  |
| <input type="checkbox"/> | L4 | asphalt with scrap | 221 |
| <input type="checkbox"/> | L3 | L2 and backing     | 1   |
| <input type="checkbox"/> | L2 | 20020007766        | 2   |

*DB=PGPB,USPT,EPAB,JPAB,DWPI; THES=ASSIGNEE; PLUR=YES; OP=OR*

- |                          |    |   |   |
|--------------------------|----|---|---|
| <input type="checkbox"/> | L1 | (asphalt and 241/\$.ccls. and(shingle or roof\$4) and flakes and surfac\$6) | 2 |
|--------------------------|----|---|---|

END OF SEARCH HISTORY